

Twelfth Census of the United States.

CENSUS BULLETIN.

No. 207.

WASHINGTON, D. C.

June 24, 1902.

AGRICULTURE.

PENNSYLVANIA.

Hon. WILLIAM R. MERRIAM,
Director of the Census.

SIR: I have the honor to transmit herewith, for publication in bulletin form, the statistics of agriculture in the state of Pennsylvania, taken in accordance with the provisions of section 7 of the act of March 3, 1899. This section requires that—

The schedules relating to agriculture shall comprehend the following topics: Name of occupant of each farm, color of occupant, tenure, acreage, value of farm and improvements, acreage of different products, quantity and value of products, and number and value of live stock. All questions as to quantity and value of crops shall relate to the year ending December thirty-first next preceding the enumeration.

A "farm," as defined by the Twelfth Census, includes all the land, under one management, used for raising crops and pasturing live stock, with the wood lots, swamps, meadows, etc., connected therewith. It includes also the house in which the farmer resides, and all other buildings used by him in connection with his farming operations.

The farms of Pennsylvania, June 1, 1900, numbered 224,248, and were valued at \$898,272,750. Of this amount \$322,879,810, or 35.9 per cent, represents the value of buildings, and \$575,392,940, or 64.1 per cent, the value of the land and improvements other than buildings. On the same date the value of farm implements and machinery was \$50,917,240, and that of live stock, \$102,439,183. These values, added to that of farms, give \$1,051,629,173, the "total value of farm property."

The products derived from domestic animals, poultry, and bees, including animals sold and animals slaughtered on farms, are referred to in this bulletin as "animal products."

The total value of all such products, together with the value of all crops, is termed "total value of farm products." This value for 1899 was \$207,895,600, of which amount \$80,901,459, or 38.9 per cent, represents the value of animal products, and \$126,994,141, or 61.1 per cent, the value of crops, including forest products cut or produced on farms. The "total value of farm products" for 1899 exceeds that for 1889 by \$86,567,252, or 71.3 per cent, but a part of this gain is doubtless due to a more detailed enumeration in 1900 than in 1890.

The "gross farm income" is obtained by deducting from the total value of farm products the value of the products fed to live stock on the farms of the producers. In 1899 the reported value of products fed was \$57,043,770, leaving \$150,851,830 as the gross farm income for that year. The ratio which this amount bears to the "total value of farm property" is referred to in this bulletin as the "percentage of gross income upon investment." For Pennsylvania, in 1899, it was 14.3 per cent.

As no reports of expenditures for taxes, interest, insurance, feed for stock, and similar items have been obtained by any census, no statement of net farm income can be given.

The statistics presented in this bulletin will be treated in greater detail in the report on agriculture in the United States. The present publication is designed to present a summarized advance statement for Pennsylvania.

Very respectfully,

L. G. Powers.
Chief Statistician for Agriculture.

AGRICULTURE IN PENNSYLVANIA.

GENERAL STATISTICS.

Pennsylvania has a total land area of 44,985 square miles, or 28,790,400 acres, of which 19,371,015 acres, or 67.8 per cent, are included in farms.

The surface of Pennsylvania is greatly varied, but is everywhere more or less hilly. The western part, occupying about one-fourth of the area of the state, is a broad plateau, whose rolling surface is broken by occasional ranges of hills, and deeply furrowed by water courses. The southeastern portion, extending from the Delaware River to the Blue Ridge, is for the most part undulating, and admirably adapted to the production of cereals.

Between these two sections, extending across the state from southwest to northeast, is a mountainous region, composed of the mountain chains which constitute the Appalachian system. The elevation of the greater part of these mountains is not more than 2,000 feet. They are intersected by numerous valleys, often of considerable length and breadth, but sometimes narrow and deep. The state is very well watered, and the soil, except in the mountains, is everywhere fertile, and even where least adapted to agriculture is suitable for grazing purposes.

NUMBER AND SIZE OF FARMS.

The following table gives, by decades since 1850, the number of farms, the total and average acreage, and the per cent of farm land improved.

TABLE 1.—FARMS AND FARM AGREAGE: 1850 TO 1900.

YEAR.	Number of farms.	NUMBER OF ACRES IN FARMS.				Per cent of farm land improved.
		Total.	Improved.	Unimproved.	Average.	
1900	224,248	19,371,015	13,209,183	6,161,832	86.4	68.2
1890	211,557	18,364,370	13,210,597	5,153,773	86.8	71.9
1880	213,542	19,791,341	13,423,007	6,368,334	92.7	67.8
1870	174,041	17,994,200	11,515,965	6,478,235	103.4	64.0
1860	156,357	17,012,140	10,463,296	6,548,844	108.8	61.5
1850	127,577	14,923,847	8,628,619	6,295,228	117.0	57.8

The total number of farms reported for 1900 shows an increase of 75.8 per cent since 1850, and an increase of 6.0 per cent in the last decade. This increase was more rapid than the increase in total acreage, involving a gradual decrease in the average size of farms.

The total acreage has increased slowly, the gain being but 29.8 per cent since 1850, and 5.5 per cent since 1890. The area of improved farm land increased at a more rapid rate than the total acreage until 1890, but the use of a more strict construction of the term "improved land" by the Twelfth Census resulted in a slight decrease for the last decade in the per cent of farm land improved.

FARM PROPERTY AND PRODUCTS.

Table 2 presents a summary of the principal statistics relating to farm property and products for each census year, beginning with 1850.

TABLE 2.—VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND OF FARM PRODUCTS: 1850 TO 1900.

YEAR.	Total value of farm property.	Land, improvements, and buildings.	Implements and machinery.	Live stock.	Farm products. ¹
1900	\$1,051,629,178	\$898,272,750	\$50,917,240	\$102,439,188	\$207,895,600
1890	1,062,939,846	922,240,233	39,046,855	101,652,758	121,328,348
1880	1,095,405,324	975,689,410	35,473,637	84,242,877	129,760,476
1870 ²	1,194,786,853	1,043,481,582	35,658,196	115,647,075	188,946,027
1860	754,166,275	662,050,707	22,442,842	69,672,726	-----
1850	464,098,693	407,876,099	14,722,541	41,500,053	-----

¹ For year preceding that designated.

² Values for 1870 were reported in depreciated currency. To reduce to specie basis of other years they must be diminished one-fifth.

³ Includes betterments and additions to live stock.

Though the total value of farm property was twice as great in 1900 as in 1850, a decrease of 1.1 per cent is shown for the last decade. This decrease is due to a loss of 2.6 per cent in the value of land, improvements, and buildings, as the value of implements and machinery increased 30.4 per cent, and that of live stock, 0.8 per cent. The value of farm products for 1899 exceeds that for 1889 by 71.3 per cent, but a part of this increase, and of that in the value of implements and machinery, is doubtless due to a more detailed enumeration in 1900 than heretofore.

COUNTY STATISTICS.

Table 3 gives a statement of general agricultural statistics by counties.

TABLE 3.—NUMBER AND ACREAGE OF FARMS, AND VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, JUNE 1, 1900, WITH VALUE OF PRODUCTS OF 1899 NOT FED TO LIVE STOCK, AND EXPENDITURES IN 1899 FOR LABOR AND FERTILIZERS, BY COUNTIES.

COUNTIES.	NUMBER OF FARMS.		ACRES IN FARMS.		VALUES OF FARM PROPERTY.				Gross income (products of 1899 not fed to live stock).	EXPENDITURES.	
	Total.	With build- ings.	Total.	Improved.	Land and im- prove- ments (ex- cept build- ings).	Buildings.	Imple- ments and machinery.	Live stock.		Labor.	Fertili- zers.
The State.....	224, 248	220, 869	19, 871, 015	13, 209, 183	\$575, 392, 940	\$322, 879, 810	\$50, 917, 240	\$102, 439, 183	\$150, 851, 880	\$16, 647, 730	\$1, 685, 920
Adams.....	3, 336	3, 319	281, 523	224, 680	6, 123, 830	4, 349, 080	753, 780	1, 489, 899	2, 288, 708	223, 990	117, 090
Allegheny.....	5, 565	5, 491	350, 596	282, 961	39, 076, 980	9, 298, 150	1, 382, 430	2, 297, 928	4, 870, 914	575, 450	116, 760
Armstrong.....	4, 202	4, 117	307, 867	277, 262	8, 541, 640	3, 970, 770	705, 630	1, 576, 189	1, 962, 072	116, 770	45, 570
Beaver.....	2, 602	2, 538	248, 973	185, 708	9, 104, 210	3, 311, 440	576, 930	1, 231, 239	1, 604, 652	137, 960	31, 180
Bedford.....	3, 615	3, 569	480, 241	268, 514	5, 960, 265	3, 167, 170	626, 160	1, 400, 765	1, 948, 438	121, 590	46, 330
Berks.....	7, 375	7, 299	461, 090	390, 703	15, 446, 830	13, 653, 240	1, 888, 860	3, 481, 690	5, 567, 282	733, 200	193, 150
Blair.....	1, 726	1, 689	204, 169	122, 276	4, 625, 200	2, 263, 240	373, 050	783, 435	1, 329, 590	143, 260	27, 480
Bradford.....	6, 679	6, 593	636, 284	447, 750	11, 586, 940	7, 387, 180	1, 464, 000	3, 078, 928	4, 103, 892	337, 620	45, 320
Bucks.....	6, 302	6, 229	358, 292	301, 693	11, 361, 080	14, 890, 970	2, 806, 580	3, 136, 516	5, 504, 257	923, 810	337, 160
Butler.....	5, 350	5, 222	444, 105	335, 689	11, 961, 090	5, 878, 180	1, 021, 240	2, 159, 876	2, 481, 327	130, 660	54, 960
Cambria.....	2, 566	2, 529	245, 525	140, 180	5, 723, 470	2, 716, 940	526, 510	944, 695	1, 472, 029	114, 310	39, 790
Cameron.....	887	880	40, 817	12, 671	398, 450	256, 580	49, 080	113, 552	161, 422	16, 020	2, 120
Carbon.....	1, 012	1, 030	116, 721	44, 298	1, 429, 620	1, 358, 520	223, 930	341, 354	571, 095	81, 050	32, 160
Center.....	2, 339	2, 306	237, 564	185, 504	6, 903, 200	3, 186, 220	676, 740	1, 258, 764	1, 604, 783	204, 180	26, 200
Chester.....	6, 202	6, 069	447, 309	371, 425	17, 181, 000	10, 584, 220	2, 178, 800	3, 988, 267	6, 365, 541	1, 141, 870	370, 880
Clarion.....	3, 192	3, 162	281, 546	195, 544	4, 719, 460	3, 082, 370	568, 100	1, 216, 762	1, 464, 446	95, 570	47, 490
Clelland.....	3, 452	3, 386	289, 300	167, 234	5, 372, 910	3, 039, 770	585, 710	1, 101, 460	1, 527, 356	107, 270	38, 770
Clinton.....	1, 362	1, 337	134, 373	72, 465	2, 663, 500	1, 541, 330	295, 500	514, 225	925, 872	30, 260	18, 890
Columbia.....	2, 760	2, 741	231, 181	165, 803	4, 182, 100	3, 049, 420	655, 990	934, 913	1, 082, 459	182, 350	84, 880
Crawford.....	7, 894	7, 704	597, 527	368, 237	13, 219, 080	6, 811, 850	1, 380, 780	3, 563, 131	3, 768, 082	263, 660	62, 400
Cumberland.....	3, 066	3, 026	285, 256	231, 593	9, 024, 070	5, 310, 470	747, 980	1, 648, 229	2, 465, 993	255, 230	70, 310
Dauphin.....	2, 844	2, 810	233, 545	178, 887	8, 553, 560	5, 081, 380	661, 405	1, 845, 186	2, 269, 018	259, 680	72, 145
Delaware.....	1, 677	1, 663	92, 498	77, 005	13, 602, 370	6, 803, 270	596, 940	1, 254, 742	2, 101, 217	444, 000	55, 600
Elk.....	996	974	81, 034	35, 040	1, 499, 080	866, 960	158, 080	323, 582	414, 024	26, 320	11, 670
Erie.....	5, 957	5, 818	459, 861	286, 480	14, 087, 150	6, 516, 850	1, 244, 910	2, 800, 886	3, 710, 336	427, 210	116, 840
Fayette.....	3, 783	3, 722	402, 283	262, 720	15, 905, 400	5, 408, 220	709, 810	1, 710, 906	2, 441, 106	282, 450	54, 610
Forest.....	587	575	58, 522	21, 439	660, 380	434, 210	77, 300	179, 085	202, 418	20, 270	3, 570
Franklin.....	3, 795	3, 761	393, 319	295, 426	11, 408, 080	6, 181, 530	943, 150	1, 967, 520	3, 021, 556	93, 870	94, 980
Fulton.....	1, 451	1, 445	199, 068	105, 420	1, 386, 290	796, 610	193, 390	484, 767	656, 583	46, 560	31, 390
Greene.....	3, 294	3, 289	354, 204	306, 334	13, 644, 580	3, 568, 650	512, 380	2, 267, 172	2, 120, 298	119, 540	13, 640
Huntingdon.....	2, 425	2, 396	363, 171	199, 020	3, 740, 380	2, 480, 550	452, 190	1, 090, 499	1, 488, 174	140, 410	29, 700
Indiana.....	4, 475	4, 420	466, 065	337, 635	10, 302, 300	4, 816, 210	766, 900	1, 927, 685	2, 285, 746	115, 860	48, 850
Jefferson.....	3, 042	2, 990	257, 441	164, 651	5, 517, 820	2, 886, 210	499, 550	1, 078, 546	1, 442, 857	78, 310	38, 450
Juniata.....	1, 556	1, 533	178, 186	103, 705	2, 757, 150	1, 617, 060	263, 040	586, 334	919, 172	80, 790	30, 940
Lackawanna.....	1, 855	1, 827	150, 722	72, 347	4, 275, 500	2, 380, 850	405, 400	811, 978	1, 339, 978	176, 720	24, 400
Lancaster.....	9, 437	9, 343	552, 761	478, 325	30, 791, 780	23, 147, 820	2, 916, 770	5, 071, 838	9, 210, 815	1, 162, 610	266, 700
Lawrence.....	2, 639	2, 567	215, 969	160, 313	7, 147, 190	3, 482, 740	528, 680	1, 325, 019	1, 638, 371	114, 250	22, 560
Lebanon.....	2, 560	2, 516	169, 975	147, 368	7, 545, 180	4, 569, 050	535, 545	1, 260, 748	1, 800, 990	235, 500	99, 175
Lehigh.....	3, 299	3, 287	139, 897	166, 244	8, 270, 920	6, 242, 880	983, 500	1, 520, 301	2, 584, 281	293, 200	74, 960
Luzerne.....	3, 295	3, 281	256, 577	151, 654	7, 967, 740	3, 879, 710	708, 490	1, 128, 464	2, 082, 827	308, 750	79, 200
Lycoming.....	3, 782	3, 727	366, 829	214, 396	7, 763, 670	4, 490, 250	898, 700	1, 458, 388	3, 141, 770	215, 970	68, 690
McKean.....	1, 877	1, 827	162, 897	72, 317	2, 645, 580	1, 580, 620	275, 060	763, 350	844, 385	98, 530	8, 840
Mercer.....	4, 956	4, 905	397, 952	285, 812	10, 704, 830	5, 361, 450	937, 570	2, 474, 671	2, 737, 407	172, 930	42, 870
Mifflin.....	1, 249	1, 232	157, 294	97, 588	3, 386, 120	1, 665, 920	298, 300	636, 347	964, 508	90, 750	15, 700
Monroe.....	2, 057	2, 036	241, 020	106, 278	2, 085, 090	2, 628, 660	399, 940	620, 604	984, 392	89, 550	30, 780
Montgomery.....	5, 890	5, 740	270, 769	239, 764	25, 269, 160	19, 080, 400	2, 184, 410	2, 747, 132	5, 258, 974	1, 079, 480	172, 680
Montour.....	812	887	75, 971	60, 648	2, 089, 360	1, 133, 750	246, 770	397, 463	664, 111	78, 300	34, 960
Northampton.....	3, 538	3, 483	191, 378	166, 820	7, 006, 010	6, 399, 540	919, 310	1, 404, 632	2, 482, 743	273, 170	64, 540
Northumberland.....	2, 604	2, 560	214, 214	167, 428	5, 479, 105	3, 590, 670	616, 760	974, 766	1, 844, 439	192, 600	72, 790
Perry.....	2, 286	2, 274	257, 782	151, 620	3, 567, 860	2, 239, 740	402, 280	840, 599	1, 258, 576	99, 310	44, 790
Philadelphia.....	1, 072	1, 025	36, 002	31, 978	21, 418, 120	4, 008, 860	537, 550	480, 090	2, 152, 650	692, 010	135, 590
Pike.....	899	888	180, 821	80, 662	1, 311, 640	1, 081, 740	154, 230	274, 221	401, 641	42, 620	5, 890
Potter.....	2, 434	2, 406	264, 723	124, 271	3, 596, 000	2, 029, 000	417, 770	1, 051, 785	1, 276, 549	108, 830	8, 610
Schuylkill.....	3, 011	2, 963	223, 484	141, 135	4, 923, 340	3, 691, 970	650, 060	1, 003, 656	2, 045, 561	240, 370	124, 740
Snyder.....	1, 854	1, 829	153, 985	111, 889	3, 303, 610	1, 778, 260	345, 680	625, 556	1, 001, 071	66, 390	35, 950
Somerset.....	3, 782	3, 719	513, 395	279, 970	8, 732, 410	4, 181, 830	792, 930	1, 812, 969	2, 370, 114	193, 560	61, 890
Sullivan.....	979	967	99, 935	52, 570	1, 224, 820	176, 140	914, 090	411, 651	486, 009	20, 000	8, 290
Susquehanna.....	4, 675	4, 611	490, 026	328, 076	6, 548, 760	5, 004, 350	873, 610	2, 415, 451	2, 775, 022	235, 150	26, 690
Tioga.....	4, 829	4, 782	460, 874	291, 363	8, 435, 250	4, 971, 960	1, 082, 800	2, 148, 006	2, 903, 814	231, 810	26, 990
Union.....	1, 521	1, 518	113, 412	88, 177	3, 692, 870	2, 034, 310	360, 940	623, 244	967, 701	90, 460	21, 490
Venango.....	3, 273	3, 198	277, 378	166, 810	5, 283, 440	2, 880, 370	580, 100	1, 157, 803	1, 360, 591	123, 110	87, 770
Warren.....	3, 238	3, 163	276, 502	131, 545	8, 943, 340	2, 512, 160	475, 810	1, 304, 873	1, 364, 873	101, 190	17, 640
Washington.....	4, 742	4, 687	523, 701	451, 705	25, 985, 300	8, 500, 770	1, 150, 120	3, 522, 645	3, 910, 480	300, 230	40, 840
Wayne.....	3, 663	3, 597	386, 536	145, 505	4, 991, 840	3, 602, 430	638, 690	1, 664, 623	1, 856, 425	153, 190	17, 990
Westmoreland.....	5, 402	5, 342	515, 729	397, 385	20, 786, 820	8, 527, 570	1, 349, 530	2, 867, 619	3, 776, 966	302, 080	65, 600
Wyoming.....	1, 752	1, 720	188, 780	109, 454	3, 091, 300	1, 961, 850	328, 970	742, 879	1, 084, 746	98, 280	3, 380
York.....	8, 091	8, 024	519, 354	421, 897	14, 571, 770	11, 250, 050	1, 721, 560	3, 577, 586	5, 609, 691	541, 510	383, 300

In nearly all counties the number of farms increased in the last decade. Eleven counties report slight decreases. Except in 8 counties, situated mostly in the southern part of the state, the total farm acreage also shows a general increase since 1890. The decrease in improved acreage reported in a number of counties, is due to a more intensive cultivation of smaller areas, and to the use of a more

strict construction of the term "improved land" by the Twelfth than by any preceding census. The average size of farms for the state is 86.4 acres, and varies from 33.6 acres in Philadelphia county, to 149.8 acres in Huntingdon county. It is smallest in the extreme southeastern counties, which are devoted to dairying and truck farming, and contain a majority of the florists' establishments of the state.

For the state, the average value of farms is \$4,006. Less than half of the counties report increases in farm values since 1890, but an increase in the value of implements and machinery is reported in all counties. The value of live stock averages \$457 per farm, having increased since 1890 in more than half of the counties.

The average expenditure for labor in 1899 was \$74 per farm. It was greatest in the counties where floriculture, dairying, and market gardening prevailed. The average expenditure for fertilizers increased from \$16 per farm in 1889 to \$21 in 1899, the majority of the counties sharing in the increase.

FARM TENURE.

Table 4 gives a comparative statement of farm tenure for 1880, 1890, and 1900. Tenants are divided into two groups: "Cash tenants," who pay a rental in cash, or a stated amount of labor or farm produce, and "share tenants," who pay as rental a stated share of the products.

In Table 5 the tenure of farms in 1900 is given by race of farmer, and "farms operated by owners" are subdivided into four groups, designated as "owners," "part owners," "owners and tenants," and "managers." These terms denote, respectively: (1) Farms operated by individuals who own all the land they cultivate; (2) farms operated by individuals who own a part of the land and rent the remainder from others; (3) farms operated under the joint direction and by the united labor of two or more individuals, one owning the farm or a part of it, and the other, or others, owning no part, but receiving for supervision or labor a share of the products; and (4) farms operated by individuals who receive for their supervision and other services a fixed salary from the owners.

TABLE 4.—NUMBER AND PER CENT OF FARMS OF SPECIFIED TENURES: 1880 TO 1900.

YEAR.	Total number of farms.	NUMBER OF FARMS OPERATED BY—			PER CENT OF FARMS OPERATED BY—		
		Owners. ¹	Cash tenants.	Share tenants.	Owners. ¹	Cash tenants.	Share tenants.
1900.....	224,248	165,982	28,787	84,529	74.0	10.6	15.4
1890.....	211,557	162,219	18,040	81,298	76.7	8.5	14.8
1880.....	213,542	168,220	17,049	28,273	78.8	8.0	13.2

¹ Including "part owners," "owners and tenants," and "managers."

TABLE 5.—NUMBER AND PER CENT OF FARMS OF SPECIFIED TENURES, JUNE 1, 1900, CLASSIFIED BY RACE OF FARMER.

PART 1.—NUMBER OF FARMS OF SPECIFIED TENURES.

RACE.	Total number of farms.	Owners.	Part owners.	Owners and tenants.	Managers.	Cash tenants.	Share tenants.
The State.....	224,248	153,031	7,074	2,174	3,703	28,787	84,529
White.....	223,657	152,707	7,048	2,173	3,680	28,592	84,467
Colored ¹	591	324	26	1	23	145	72

PART 2.—PER CENT OF FARMS OF SPECIFIED TENURES.

The State.....	100.0	68.2	3.2	1.0	1.6	10.6	15.4
White.....	100.0	68.8	3.2	1.0	1.6	10.5	15.4
Colored ¹	100.0	54.8	4.4	0.2	3.9	24.5	12.2

¹ Comprising 6 Indians and 585 negroes.

The number of farms in Pennsylvania has increased 10,706, or 5.0 per cent, during the last two decades. During this period the farms operated by owners decreased 2,238, or 1.3 per cent, though the last decade shows an increase of 3,763, or 2.3 per cent; the number operated by cash tenants increased 6,688, or 39.2 per cent; and that by share tenants increased 6,256, or 22.1 per cent. The increases shown for the tenant classes have been continuous through both decades.

Of the farms of the state, 99.7 per cent are operated by white farmers, and only 0.3 per cent by colored farmers. Of the white farmers, 72.5 per cent own all or part of the farms they operate, and 27.5 per cent operate farms owned by others. For the colored farmers, the corresponding percentages are 59.4 and 40.6, respectively.

No previous census has reported the number of farms operated by "part owners," "owners and tenants," or "managers," but it is believed that the number of farms conducted by the last-named class is constantly increasing.

FARMS CLASSIFIED BY RACE OF FARMER AND BY TENURE.

Tables 6 and 7 present the principal statistics for farms classified by race of farmer and by tenure.

TABLE 6.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY RACE OF FARMER AND BY TENURE, WITH PERCENTAGES.

RACE OF FARMER, AND TENURE.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State.....	224,248	86.4	19,871,015	100.0	\$1,051,629,173	100.0
White farmers.....	223,657	86.5	19,345,274	99.9	1,049,589,533	99.8
Colored farmers ¹	591	43.6	25,741	0.1	2,039,640	0.2
Owners.....	153,031	78.2	11,972,638	61.8	607,750,011	57.8
Part owners.....	7,074	120.3	850,820	4.4	41,461,917	3.9
Owners and tenants.....	2,174	118.7	258,065	1.3	12,071,075	1.1
Managers.....	3,703	145.9	539,046	2.8	44,924,460	4.3
Cash tenants.....	28,787	76.7	1,819,478	9.4	141,888,955	13.5
Share tenants.....	84,529	113.8	3,980,768	20.3	203,582,755	19.4

¹ Comprising 6 Indians and 585 negroes.

TABLE 7.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY RACE OF FARMER AND BY TENURE.

RACE OF FARMER, AND TENURE.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total investment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and improvements (except buildings).	Buildings.	Implementations and machinery.	Live stock.		
The State.....	\$2,566	\$1,440	\$227	\$457	\$673	14.3
White farmers.....	2,567	1,441	228	457	673	14.4
Colored farmers ¹	2,150	910	112	279	360	10.4
Owners.....	2,027	1,317	211	416	605	15.2
Part owners.....	3,482	1,539	265	675	816	14.4
Owners and tenants.....	3,078	1,625	270	584	798	14.4
Managers.....	7,522	3,377	402	831	1,118	9.2
Cash tenants.....	3,848	1,450	212	438	704	11.8
Share tenants.....	3,322	1,715	280	578	860	14.6

¹ Comprising 6 Indians and 585 negroes.

Nearly 70 per cent of all farms in the state are operated by owners, who also control about 60 per cent of the acreage and values of farm property. Farms operated by managers, though comparatively few in number, are larger in area and have higher average values of all forms of farm property than any other class. Their gross income, however, is smaller than that of the other groups.

Colored farmers occupy an insignificant place in the agriculture of the state, controlling only 0.3 per cent of the farms, and 0.1 per cent and 0.2 per cent, respectively, of the total acreage and value.

FARMS CLASSIFIED BY AREA.

Tables 8 and 9 present the principal statistics for farms classified by area.

TABLE 8.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY AREA, WITH PERCENTAGES.

AREA.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State	224,248	86.4	19,371,015	100.0	\$1,051,629,173	100.0
Under 3 acres	2,737	1.6	4,424	(1)	6,153,157	0.6
3 to 9 acres	14,419	6.0	85,982	0.4	30,078,199	2.9
10 to 19 acres	17,882	13.9	249,880	1.3	42,843,425	4.1
20 to 49 acres	41,575	38.5	1,392,167	7.2	122,268,356	11.6
50 to 99 acres	69,670	70.6	4,917,987	25.4	291,902,055	27.8
100 to 174 acres	57,800	126.4	7,308,029	37.7	359,518,853	34.2
175 to 259 acres	14,151	204.1	2,887,951	14.9	121,385,393	11.5
260 to 499 acres	5,088	322.3	1,640,093	8.5	56,938,894	5.4
500 to 999 acres	688	615.2	423,220	2.2	14,136,425	1.3
1,000 acres and over	238	1,940.2	461,773	2.4	6,403,816	0.6

¹ Less than one-tenth of 1 per cent.

TABLE 9.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY AREA.

AREA.	AVERAGE VALUES PER FARM OF--					Per cent of gross income on total investment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and improvements (except buildings).	Buildings.	Implementments and machinery.	Live stock.		
The State -----	\$2,566	\$1,440	\$227	\$457	\$878	14.3
Under 3 acres	855	1,233	78	87	518	23.1
3 to 9 acres	949	948	76	113	282	13.5
10 to 19 acres	1,180	968	94	154	303	12.6
20 to 49 acres	1,512	1,043	188	248	413	14.0
50 to 99 acres	2,190	1,845	225	429	632	15.1
100 to 174 acres	3,458	1,788	314	660	919	14.8
175 to 259 acres	5,137	2,185	386	870	1,178	13.7
260 to 499 acres	7,064	2,567	442	1,118	1,886	12.4
500 to 999 acres	14,043	4,871	584	1,549	1,940	9.4
1,000 acres and over	19,420	4,914	740	1,833	2,294	8.5

The group of farms containing from 50 to 99 acres each includes a larger number of farms than any other, but the

group containing from 100 to 174 acres comprises more than one-third of the total farm acreage, and the same proportion of the values of farm property of the state.

With few exceptions, the average values of all forms of farm property increase with the size of the farms. The farms containing less than three acres are an exception to this rule, in the value of buildings and in gross income, this class containing most of the florists' establishments of the state, and many city dairies and market gardens. The incomes from these industries depend less upon the acreage of owned or rented land used than upon the capital invested in buildings, implements, and live stock, and the expenditures for labor and fertilizers.

The average value per acre of the gross income for the various groups of farms classified by area is as follows: Farms under 3 acres, \$320.66; 3 to 9 acres, \$47.21; 10 to 19 acres, \$21.70; 20 to 49 acres, \$12.33; 50 to 99 acres, \$8.96; 100 to 174 acres, \$7.27; 175 to 259 acres, \$5.77; 260 to 499 acres, \$4.30; 500 to 999 acres, \$3.15; and 1,000 acres and over, \$1.18.

FARMS CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.

Tables 10 and 11 present the leading features of the statistics relating to farms classified by principal source of income.

If the value of the hay and grain raised on any farm exceeds that of any other crop, and constitutes at least 40 per cent of the total value of products not fed to live stock, the farm is classified as a "hay and grain" farm. Similarly, if vegetables are the leading crop, constituting 40 per cent of the value of products, it is a "vegetable" farm. The farms of the other groups are classified in accordance with the same general principle. "Miscellaneous" farms are those whose operators do not derive their principal income from any one class of farm products. Farms with no income in 1899 are classified according to the agricultural operations upon other farms in the same locality.

TABLE 10.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY PRINCIPAL SOURCE OF INCOME, WITH PERCENTAGES.

PRINCIPAL SOURCE OF INCOME.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State	224,248	86.4	19,371,015	100.0	\$1,051,629,173	100.0
Hay and grain	30,823	109.8	3,384,292	17.5	180,457,842	17.2
Vegetables	6,963	47.7	332,033	1.7	44,632,747	4.2
Fruits	3,577	49.1	175,800	0.9	15,505,046	1.5
Live stock	75,995	84.4	6,413,808	33.1	805,224,365	29.0
Dairy produce	32,600	86.0	2,803,870	14.5	193,102,562	18.4
Tobacco	2,074	60.1	124,663	0.6	13,257,931	1.3
Sugar	24	537.8	12,907	0.1	301,149	(1)
Flowers and plants	734	8.5	4,745	(1)	6,894,885	0.6
Nursery products	95	61.1	5,801	(1)	990,193	0.1
Miscellaneous	71,363	85.7	6,113,296	31.6	291,262,377	27.7

¹ Less than one-tenth of 1 per cent.

TABLE 11.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY PRINCIPAL SOURCE OF INCOME.

PRINCIPAL SOURCE OF INCOME.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total investment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and improvements (except buildings).	Buildings.	Implements and machinery.	Live stock.		
The State -----	\$2,566	\$1,440	\$227	\$457	\$673	14.3
Hay and grain -----	3,497	1,668	246	444	730	12.5
Vegetables -----	4,433	1,487	226	264	762	11.9
Fruits -----	2,589	1,348	176	222	614	14.2
Live stock -----	2,069	1,264	207	476	580	14.4
Dairy produce -----	3,217	1,782	289	635	889	15.0
Tobacco -----	3,236	2,370	286	500	1,108	17.3
Sugar -----	10,431	1,281	280	556	782	6.2
Flowers and plants -----	5,049	4,023	244	78	3,017	32.1
Nursery products -----	7,243	2,703	229	248	5,301	50.9
Miscellaneous -----	2,158	1,317	212	394	599	14.7

For the several classes of farms, the average values per acre of products not fed to live stock are as follows: For farms whose operators derive their principal income from flowers and plants, \$466.69; nursery products, \$86.81; tobacco, \$18.48; vegetables, \$15.98; fruits, \$12.40; dairy produce, \$10.34; miscellaneous, \$7.00; live stock, \$6.87; hay and grain, \$6.65; and sugar, \$1.45. In computing these averages, the total area is used, and not merely the area devoted to the crop from which the principal income is derived.

The wide variations shown in the average gross income and in the percentage of gross income upon investment, are due largely to the fact that in computing gross incomes no deduction is made for expenditures. For florists' establishments, nurseries, and market gardens, the average expenditures for such items as labor and fertilizers represent a far larger percentage of the gross income than in the case of "hay and grain," "live-stock," or "miscellaneous" farms. Were it possible to present the average net income, the variations shown would be comparatively slight.

FARMS CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK.

Tables 12 and 13 present data relating to farms classified by the reported value of products not fed to live stock.

TABLE 12.—NUMBER AND ACREAGE OF FARMS, AND VALUE OF FARM PROPERTY, JUNE 1, 1900, CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK, WITH PERCENTAGES.

VALUE OF PRODUCTS NOT FED TO LIVE STOCK.	Number of farms.	NUMBER OF ACRES IN FARMS.			VALUE OF FARM PROPERTY.	
		Average.	Total.	Per cent.	Total.	Per cent.
The State -----	224,248	86.4	19,371,015	100.0	\$1,051,629,173	100.0
\$0 -----	459	61.0	27,999	0.2	1,365,910	0.1
\$1 to \$19 -----	2,724	33.1	90,229	0.5	4,819,740	0.4
\$50 to \$99 -----	7,637	31.5	240,200	1.2	11,499,720	1.1
\$100 to \$249 -----	41,494	41.1	1,706,484	8.8	75,465,630	7.2
\$250 to \$499 -----	63,681	65.9	4,198,914	21.7	191,076,765	18.2
\$500 to \$999 -----	65,615	104.7	6,862,020	35.4	326,665,378	31.1
\$1,000 to \$2,499 -----	38,454	141.6	5,443,775	28.1	351,587,860	33.4
\$2,500 and over -----	4,284	187.1	801,394	4.1	89,148,780	8.5

TABLE 13.—AVERAGE VALUES OF SPECIFIED CLASSES OF FARM PROPERTY, AND AVERAGE GROSS INCOME PER FARM, WITH PER CENT OF GROSS INCOME ON TOTAL INVESTMENT IN FARM PROPERTY, CLASSIFIED BY REPORTED VALUE OF PRODUCTS NOT FED TO LIVE STOCK.

VALUE OF PRODUCTS NOT FED TO LIVE STOCK.	AVERAGE VALUES PER FARM OF—					Per cent of gross income on total investment in farm property.
	Farm property, June 1, 1900.				Gross income (products of 1899 not fed to live stock).	
	Land and im- provements (except build- ings).	Build- ings.	Imple- ments and ma- chinery.	Live stock.		
The State -----	\$2,566	\$1,440	\$227	\$457	\$673	14.3
\$0 -----	2,028	747	39	162	37	-----
\$1 to \$19 -----	1,185	478	34	72	37	2.1
\$50 to \$99 -----	812	566	42	86	80	5.3
\$100 to \$249 -----	929	678	73	139	177	9.7
\$250 to \$499 -----	1,560	1,003	145	303	367	12.2
\$500 to \$999 -----	2,658	1,534	261	533	710	14.2
\$1,000 to \$2,499 -----	5,130	2,656	455	902	1,446	15.8
\$2,500 and over -----	13,162	5,215	841	1,592	4,035	19.4

Of the 459 farms reporting no income in 1899, some were summer homes and a few were abandoned farms. Some were farms which had changed owners or tenants shortly before the date of enumeration and for which the occupants, June 1, 1900, could furnish no definite information concerning the products of the previous year. To this extent, the reports fall short of giving a complete exhibit of farm income in 1899.

LIVE STOCK.

At the request of the various live-stock associations of

the country, a new classification of domestic animals was adopted for the census of 1900. The age grouping for neat cattle is determined by their present and prospective relations to the dairy industry and the supply of meat products. Horses and mules are classified by age, and neat cattle and sheep by age and sex. The new classification permits a very close comparison with the previous census reports.

Table 14 presents a summary of live-stock statistics.

TABLE 14.—DOMESTIC ANIMALS, FOWLS, AND BEES, ON FARMS, JUNE 1, 1900, WITH TOTAL AND AVERAGE VALUES, AND NUMBER OF DOMESTIC ANIMALS NOT ON FARMS.

LIVE STOCK.	Age in years.	ON FARMS.			NOT ON FARMS.
		Number.	Value.	Average value.	Number.
Calves.....	Under 1.....	421,323	\$3,082,067	\$7.20	9,351
Steers.....	1 and under 2.....	108,681	1,739,459	16.01	1,787
Steers.....	2 and under 3.....	64,252	1,903,405	29.62	1,432
Steers.....	3 and over.....	16,382	712,704	43.51	1,720
Bulls.....	1 and over.....	69,006	1,607,397	23.29	934
Heifers.....	1 and under 2.....	224,623	3,705,397	16.50	5,420
Cows kept for milk.....	2 and over.....	943,773	29,141,661	30.83	78,301
Cows and heifers not kept for milk.....	2 and over.....	48,807	1,221,261	25.02	1,400
Colts.....	Under 1.....	28,547	808,696	28.26	878
Horses.....	1 and under 2.....	36,584	1,916,501	52.39	1,371
Horses.....	2 and over.....	525,850	38,225,630	72.69	218,006
Mule colts.....	Under 1.....	1,144	45,876	40.10	50
Mules.....	1 and under 2.....	3,604	210,286	58.35	183
Mules.....	2 and over.....	33,311	2,651,523	79.60	21,977
Asses and burros.....	All ages.....	576	22,559	39.16	601
Lambs.....	Under 1.....	571,583	1,827,924	2.32	2,460
Sheep (ewes).....	1 and over.....	769,463	2,651,067	3.45	6,789
Sheep (rams and wethers).....	1 and over.....	190,020	663,615	3.49	818
Swine.....	All ages.....	1,107,981	5,830,295	5.26	157,346
Goats.....	All ages.....	2,197	8,951	4.07	6,548
Fowls: ¹					
Chickens ²		10,553,106	4,483,486		
Turkeys.....		259,824			
Geese.....		60,780			
Ducks.....		171,271			
Bees (swarms of).....		161,670	581,578	3.29	
Value of all live stock.....			102,439,183		

¹ The number reported is of fowls over 3 months old. The value is of all, old and young.

² Including Guinea fowls.

The total value of all live stock on farms, June 1, 1900, was \$102,439,183, of which 40.0 per cent represents the value of horses; 28.4 per cent, that of dairy cows; 13.6 per cent, that of other neat cattle; 5.7 per cent, that of swine; 4.5 per cent, that of sheep; 4.4 per cent, that of poultry; and 3.4 per cent, that of all other live stock.

There were kept in towns and cities nearly one-twelfth as many dairy cows, nearly one-half as many horses two years old and over, almost two-thirds as many mules two years and over, and about one-seventh as many swine, as on farms.

No reports were secured of the value of live stock not on farms, but it is probable that such animals have higher average values than those on farms. Allowing the same averages, however, the value of all live stock not on farms would be \$21,392,693. Exclusive of poultry and bees not on farms, the total value of live stock in the state is, approximately, \$123,831,876.

CHANGES IN LIVE STOCK ON FARMS.

The following table shows the changes since 1850 in the numbers of the most important domestic animals.

TABLE 15.—NUMBER OF SPECIFIED DOMESTIC ANIMALS ON FARMS: 1850 TO 1900.

YEAR.	Dairy cows.	Other neat cattle.	Horses.	Mules and asses.	Sheep. ¹	Swine.
1900.....	943,773	953,074	590,981	38,635	959,483	1,107,981
1890.....	927,254	779,164	618,660	29,563	1,812,107	1,278,029
1880.....	854,156	876,081	533,587	22,914	1,776,598	1,187,968
1870.....	706,437	638,114	460,339	18,009	1,794,801	867,548
1860.....	673,547	745,946	437,654	8,832	1,631,540	1,031,266
1850.....	530,224	623,722	350,398	2,259	1,822,367	1,040,366

¹ Lambs not included.

Every decade since 1850 shows an increase in the number of dairy cows. The gain since 1850 is 78.0 per cent, and since 1890, 1.8 per cent. The number of other neat cattle has fluctuated from decade to decade, but shows an increase of 52.8 per cent since 1850, and 22.3 per cent since 1890. Except for a decrease in the last decade of 4.5 per cent, each decade since 1850 shows an increase in the number of horses reported. There were 17 times as many mules and asses reported in 1900 as in 1850, every decade showing an increase, that of the last being 30.7 per cent.

In the year 1850 more sheep were reported than at any later date. Every decade since 1870 records a decrease in numbers, that in the last being 40.5 per cent. Swine have fluctuated in number, the census of 1900 showing an increase of 6.5 per cent since 1850; but a decrease of 13.3 per cent since 1890.

The fact that in 1900 the enumerators were instructed to report no fowls under 3 months old, while in 1890 no such limitation was made, explains, to a great extent, the small increase in the number of chickens reported, and the decreases in the numbers of all other fowls. An increase in the number of eggs reported tends to confirm this statement. Compared with the figures for 1890, the present census shows an increase of 1.7 per cent in the number of chickens, and the following decreases in the numbers of other fowls: Ducks, 52.1 per cent; turkeys, 51.5 per cent; and geese, 42.9 per cent.

ANIMAL PRODUCTS.

Table 16 is a summarized statement of animal products on farms.

TABLE 16.—QUANTITIES AND VALUES OF SPECIFIED ANIMAL PRODUCTS, AND VALUES OF POULTRY RAISED, ANIMALS SOLD, AND ANIMALS SLAUGHTERED ON FARMS, IN 1899.

PRODUCTS.	Unit of measure.	Quantity.	Value.
Wool.....	Pounds.....	6,782,226	\$1,881,689
Mohair and goat hair.....	Pounds.....	720	242
Milk.....	Gallons.....	1,487,033,818	\$35,860,110
Butter.....	Pounds.....	74,221,085	
Cheese.....	Pounds.....	857,167	9,080,725
Eggs.....	Dozens.....	67,038,180	
Poultry.....			7,151,243
Honey.....	Pounds.....	2,526,202	805,292
Wax.....	Pounds.....	61,802	
Animals sold.....			15,494,178
Animals slaughtered.....			11,627,980
Total.....			80,901,459

¹ Includes all milk produced, whether sold, consumed, or made into butter or cheese.

² Includes the value of milk sold or consumed, and of butter and cheese made.

The value of all animal products of the state for 1899 was \$80,901,459, of which 44.3 per cent represents the value of dairy produce; 33.5 per cent, that of animals sold and animals slaughtered on farms; 20.1 per cent, that of poultry and eggs; 1.7 per cent, that of wool, mohair, and goat hair; and 0.4 per cent, that of honey and wax.

DAIRY PRODUCE.

In 1899 the proprietors of 32,600 farms, or 14.5 per cent of the farms of the state, derived their principal income from dairy produce. The production of milk in 1899 was 118,127,338 gallons greater than in 1889, a gain of 32.0 per cent. The amount of cheese made on farms increased 95.2 per cent in the last decade, while the amount of butter made on farms decreased 3.4 per cent in the same time, owing, largely, to the constantly increasing amount of milk and cream consumed in cities and to the transfer of butter making from the farm to the creamery.

Of the \$35,860,110 given in Table 16 as the value of dairy produce, 75.4 per cent, or \$27,053,424, represents the value of dairy products sold, and 24.6 per cent, or \$8,806,686, the value of such products consumed on farms. Of the former amount, \$17,274,430 was received from the sale of 171,045,659 gallons of milk; \$9,466,575, from 51,309,833 pounds of butter; \$249,779, from 537,445 gallons of cream; and \$62,640, from 812,528 pounds of cheese.

ANIMALS SOLD AND ANIMALS SLAUGHTERED.

The value of animals sold and animals slaughtered on farms is \$27,122,158, or 18.0 per cent of the gross farm income. Of all farmers reporting domestic animals, 180,508, or 83.9 per cent, reported animals slaughtered, the average value per farm being \$64.42. Of all reporting domestic animals, 141,450, or 65.7 per cent, reported sales of live animals, the average value per farm being \$109.54. In reporting the value of animals sold on farms the enumerators were instructed to secure from each operator a statement of the amount received from sales in 1899, less the amount paid for live stock in that year.

POULTRY, EGGS, WOOL, AND HONEY AND WAX.

Of the \$16,231,968, given as the value of poultry and eggs, 55.9 per cent represents the value of eggs produced, and 44.1 per cent, the value of poultry raised. In 1899, 16,988,265 dozen more eggs were produced than in 1889, a gain of 33.9 per cent.

The amount of wool reported in 1900 was 4.5 per cent greater than that reported in 1890. The average weight of fleeces increased from 5.3 pounds to 6.7 pounds, indicating an improvement in the grade of sheep kept.

Bradford county leads in the production of apianian products, reporting 218,590 pounds of honey for 1899. For the state, 2,526,202 pounds of honey and 61,302 pounds of wax were reported in 1900, a gain in the last decade of 3.0 per cent in honey, and 53.7 per cent in wax.

HORSES AND DAIRY COWS ON SPECIFIED CLASSES OF FARMS.

Table 17 presents, for the leading groups of farms, the

number of farms reporting horses and dairy cows, the total number of these animals, and the average number per farm. In computing the averages presented, only those farms which report the kind of stock under consideration are included.

TABLE 17.—HORSES AND DAIRY COWS ON SPECIFIED CLASSES OF FARMS, JUNE 1, 1900.

CLASSES.	HORSES.			DAIRY COWS.		
	Farms reporting.	Number.	Average per farm.	Farms reporting.	Number.	Average per farm.
Total	195,983	500,981	3.0	200,086	943,773	4.7
White farmers.....	195,472	589,754	3.0	199,668	942,193	4.7
Colored farmers.....	511	1,227	2.4	868	1,580	4.3
Owners ¹	140,535	402,309	2.9	144,750	629,121	4.3
Managers.....	3,089	14,143	4.6	2,990	19,729	6.6
Cash tenants.....	20,021	57,150	2.9	19,722	104,632	5.3
Share tenants.....	32,538	117,379	3.6	32,574	190,291	5.8
Under 20 acres.....	22,814	32,603	1.4	23,904	43,232	1.8
20 to 99 acres.....	98,371	250,189	2.5	101,507	395,093	3.9
100 to 174 acres.....	55,338	210,336	3.8	56,131	356,027	6.3
175 to 259 acres.....	13,754	61,658	4.7	12,822	100,453	7.8
260 acres and over.....	5,706	33,195	5.8	5,672	48,968	8.6
Hay and grain.....	24,007	88,780	3.7	23,033	106,270	4.6
Vegetable.....	5,956	14,864	2.5	4,505	11,658	2.6
Fruit.....	2,821	6,137	2.2	2,258	5,301	2.3
Live stock.....	67,599	205,483	3.0	70,338	277,374	3.9
Dairy produce.....	31,125	96,609	3.1	32,600	284,921	8.7
Tobacco.....	1,878	4,980	2.7	1,765	7,451	4.2
Flower and plant.....	245	535	2.2	114	203	1.8
Miscellaneous ²	62,352	173,553	2.8	65,423	250,595	3.8

¹Including "part owners" and "owners and tenants."

²Including sugar farms and nurseries.

CROPS.

The following table gives the statistics of the principal crops of 1899.

TABLE 18.—ACREAGES, QUANTITIES, AND VALUES OF PRINCIPAL FARM CROPS IN 1899.

CROPS.	Acres.	Unit of measure.	Quantity.	Value.
Corn.....	1,480,833	Bushels.....	51,869,780	\$21,896,795
Wheat.....	1,514,043	Bushels.....	20,632,680	13,712,976
Oats.....	1,173,847	Bushels.....	37,242,810	11,093,893
Barley.....	9,583	Bushels.....	197,178	89,163
Rye.....	310,048	Bushels.....	3,914,750	2,070,847
Buckwheat.....	249,840	Bushels.....	3,922,980	1,945,860
Broom corn.....	221	Pounds.....	114,610	6,817
Kafir corn.....	1	Bushels.....	14	7
Flaxseed.....	75	Bushels.....	684	741
Clover seed.....	—	Bushels.....	37,276	163,522
Grass seed.....	—	Bushels.....	12,846	18,978
Hay and forage.....	3,259,411	Tons.....	4,020,388	87,514,779
Tobacco.....	27,760	Pounds.....	41,502,620	2,959,304
Hemp.....	3	Pounds.....	3,850	228
Hops.....	13	Pounds.....	13,710	1,451
Peanuts.....	2	Bushels.....	77	99
Dry beans.....	2,182	Bushels.....	23,957	38,719
Dry peas.....	482	Bushels.....	6,363	7,618
Potatoes.....	227,867	Bushels.....	21,769,472	9,397,054
Sweet potatoes.....	3,443	Bushels.....	234,724	180,990
Onions.....	1,505	Bushels.....	347,806	216,646
Miscellaneous vegetables.....	77,621	—	—	6,088,214
Maple sugar.....	—	Pounds.....	1,423,540	115,910
Maple sirup.....	—	Gallons.....	160,297	123,863
Sorghum cane.....	105	Tons.....	121	71
Sorghum sirup.....	—	Gallons.....	6,514	3,090
Small fruits.....	12,271	—	—	1,268,827
Grapes.....	27,852	Centals.....	471,254	339,518
Orchard fruits.....	2318,215	—	—	47,976,464
Nuts.....	—	—	—	91,149
Forest products.....	—	—	—	6,481,181
Flowers and plants.....	1,073	—	—	2,246,075
Seeds.....	866	—	—	104,229
Nursery products.....	3,201	—	—	541,032
Willows.....	5	—	—	715
Miscellaneous.....	10	—	—	47,316
Total.....	8,692,408	—	—	126,994,141

¹Sold as cane.

²Estimated from number of vines or trees.

³Including value of raisins, wine, etc.

⁴Including value of cider, vinegar, etc.

Of the total value of crops in 1899, cereals, including Kafir corn, contributed 40.0 per cent; hay and forage, 29.5 per cent; vegetables, including potatoes, sweet potatoes, and onions, 12.5 per cent; fruits and nuts, 7.9 per cent; forest products, 5.1 per cent; flowers and plants, 1.8 per cent; and all other products, 3.2 per cent.

The average values per acre of the several crops were as follows: Flowers and plants, \$2,093.27; nursery products, \$169.02; onions, \$143.95; tobacco, \$106.60; small fruits, \$103.40; miscellaneous vegetables, \$78.44; potatoes, \$41.24; orchard fruits, \$25.07; cereals, including Kafir corn, \$10.72; hay and forage, \$11.47. The crops yielding the greatest returns were grown upon the most highly cultivated land, and required relatively large expenditures for labor and fertilizers.

CEREALS.

Table 19 is a statement of the changes in cereal production since 1849.

TABLE 19.—ACREAGE AND PRODUCTION OF CEREALS: 1849 TO 1899.

PART 1.—ACREAGE.

YEAR. ¹	Barley.	Buck-wheat.	Corn.	Oats.	Rye.	Wheat.
1899	9,583	249,840	1,480,833	1,173,847	310,048	1,514,043
1889	20,950	210,488	1,252,399	1,310,197	336,041	1,318,472
1879	23,592	246,199	1,373,270	1,237,593	398,465	1,445,884

¹ No statistics of acreage were secured prior to 1879.

PART 2.—BUSHELS PRODUCED.

YEAR.	Barley.	Buck-wheat.	Corn.	Oats.	Rye.	Wheat.
1899	197,178	3,922,980	51,869,780	37,242,810	3,944,750	20,632,680
1889	493,863	3,069,717	42,318,279	36,197,409	3,742,164	21,595,499
1879	438,100	3,593,325	45,821,591	33,841,439	3,683,621	19,462,405
1869	529,562	2,582,173	34,702,093	36,478,585	3,577,641	19,672,967
1859	530,714	5,572,024	28,196,821	27,387,147	5,474,788	13,042,165
1849	165,584	2,193,692	19,835,214	21,538,156	4,805,160	15,367,691

The total area under cereals in 1879 was 4,724,503 acres; in 1889, 4,448,547 acres; and in 1899, 4,738,194 acres. Of the total area under cereals in 1899, 32.0 per cent was devoted to wheat; 31.2 per cent, to corn; 24.8 per cent, to oats; 6.5 per cent, to rye; 5.3 per cent, to buckwheat; and 0.2 per cent, to barley.

The area under wheat in 1899 was 14.8 per cent greater than ten years before; that under corn, 18.2 per cent; and that under buckwheat, 18.7 per cent. The area devoted to rye decreased 7.7 per cent in the decade 1889–1899; that under oats, 10.4 per cent; and that under barley, 54.3 per cent.

The total number of bushels produced in 1849 was 63,905,497, and in 1899, 117,810,178, a gain of 84.4 per cent in fifty years.

The largest area under wheat was in the southeastern part of the state, Lancaster, York, and Franklin counties each producing over 1,000,000 bushels in 1899. This section led also in the production of corn, Lancaster county reporting over 4,000,000 bushels, and York county, over 3,000,000 bushels. Oats were raised extensively in the eastern section, several counties showing yields of over 1,000,000 bushels each. Rye was also reported largely in the eastern part, while barley was more abundantly grown in the central portion of the state.

HAY AND FORAGE.

In 1900, 207,706 farmers, or 92.6 per cent of the total number, reported hay and forage crops, of which, exclusive of cornstalks and corn strippings, they obtained an average yield of 1.2 tons per acre. The acreage in hay and forage in 1899 was 1.6 per cent less than ten years before.

In 1899 the acreages and yields of the various kinds of hay and forage were as follows: Clover, 293,683 acres and 336,072 tons; other tame and cultivated grasses, 2,873,126 acres and 3,174,110 tons; grains cut green for hay, 44,729 acres and 57,821 tons; forage crops, 45,366 acres and 181,023 tons; and other kinds, 231,961 acres and 271,362 tons.

In Table 18 the production of cornstalks and corn strippings is included under "hay and forage" but the acreage is included under "corn," as the forage secured was only an incidental product of the corn crop.

ORCHARD FRUITS.

The changes in orchard fruits since 1890 are shown in the following table.

TABLE 20.—ORCHARD TREES AND FRUITS: 1890 AND 1900.

FRUITS.	NUMBER OF TREES.		BUSHELS OF FRUIT.	
	1900.	1890.	1899.	1889.
Apples	11,774,211	9,097,700	24,060,651	7,552,710
Apricots	10,044	5,913	1,634	169
Cherries	956,273	465,867	474,940	60,571
Peaches	3,521,930	1,146,342	143,464	117,151
Pears	815,349	325,062	434,177	141,534
Plums and prunes	707,512	152,533	100,210	7,899

The total number of fruit trees in 1890 was 11,193,417, while in 1900 there were 17,844,269—an increase of 6,650,852, or 59.4 per cent, in the decade. The number of plum and prune trees reported in 1900 was nearly five times as great as in 1890, and the numbers of peach, pear, and cherry trees were approximately three times as great. The number of apricot trees increased 69.9 per cent, and that of apple trees, 29.4 per cent. The increases were quite evenly distributed throughout the state.

Of the total number in 1900, 66.0 per cent were apple trees; 19.7 per cent, peach trees; 5.4 per cent, cherry trees; 4.6 per cent, pear trees; 4.3 per cent, apricot, plum, prune, and unclassified trees; the latter class, which is not included in the table, numbered 58,950 and yielded 21,778 bushels of fruit. The value of orchard products given in Table 18 includes the value of 504,472 barrels of cider, 110,324 barrels of vinegar, and 938,810 pounds of dried and evaporated fruits. Comparisons of fruit yields or values, when made by decades only, are of little value, as the yield of any given year depends upon the season.

SMALL FRUITS.

The total area used in the cultivation of small fruits in 1899 was 12,271 acres, distributed among 50,937 farms, an average of 0.24 acre per farm. Of the total area, 5,667 acres, yielding 10,179,430 quarts, were devoted to strawberries.

These berries were grown generally throughout the state, but the southeastern counties of York, Lancaster, Berks, and Chester, together with the western counties of Allegheny and Erie, report 38.0 per cent of the product and 36.4 per cent of the acreage. The acreages and productions of the other berries were as follows: Raspberries and Logan berries, 3,938 acres and 5,360,530 quarts; blackberries and dewberries, 1,883 acres and 1,995,070 quarts; currants, 716 acres and 1,081,870 quarts; gooseberries, 267 acres and 366,930 quarts; and other small fruits, 300 acres and 326,730 quarts.

VEGETABLES.

The total area used in the cultivation of vegetables, including potatoes, sweet potatoes, and onions, in 1899 was 310,436 acres. Of this area 73.4 per cent was devoted to potatoes, 25.0 per cent to miscellaneous vegetables, 1.1 per cent to sweet potatoes, and 0.5 per cent to onions. Potatoes were extensively raised throughout the state, 227,867 acres being devoted to them, and yielding 21,769,472 bushels, an average of 95.5 bushels per acre.

The total area used in the cultivation of miscellaneous vegetables was 77,621 acres, of which the products of 42,041 acres were not reported in detail. Of the remaining 35,580 acres, 12,879 were devoted to sweet corn; 10,851, to cabbages; 6,089, to tomatoes; 785, to turnips; 754, to muskmelons; 749, to cucumbers; 618, to watermelons; 596, to asparagus; 561, to celery; and 1,698, to other vegetables.

TOBACCO.

Though tobacco was cultivated in Pennsylvania as early as 1689, its production was not reported with any degree of care until 1840. In that year the total production was 325,018 pounds, and with the exception of a decrease in the decade from 1880 to 1890 the production has steadily and rapidly increased. The increase in production for the last decade was 43.3 per cent, and that in acreage, 3.0 per cent.

The present census shows that tobacco was grown in 1899 by 9,621 farmers, who obtained from 27,760 acres a yield of 41,502,620 pounds, or an average of 1,495 pounds per acre.

The most important tobacco region in the state is the southeastern part, where Lancaster and York counties reported a total of 34,413,650 pounds. In Lancaster county, which was the leading tobacco county of the country in 1889, there were 5,809 farmers, June 1, 1900, who reported a total of 18,025 acres, upon which they raised 28,246,160 pounds, or 68.1 per cent of the state total. The value of the product in this county was \$1,991,446. In the northern part of the state, Tioga county reported 2,812,380 pounds; Bradford county, 1,698,820 pounds; and Clinton county, 1,221,730 pounds. Other counties producing over 200,000 pounds, are Chester, Lebanon, and Lycoming.

SORGHUM CANE.

The present census shows that in 1899, 233 farmers raised 105 acres of sorghum cane, from which they sold

21 tons of cane for \$71, and from the remaining product manufactured 6,514 gallons of sirup, valued at \$3,090. This was a decrease in acreage since 1889 of 78.5 per cent. The sorghum crop reached its highest point in 1869, with a production of 213,373 gallons of sirup.

FLORICULTURE.

The area devoted to the cultivation of flowers and ornamental plants in 1899 was 1,073 acres, and the value of the products sold therefrom was \$2,246,075. These flowers and plants were grown by 1,093 farmers and florists, of whom 734 made commercial floriculture their principal business. These 734 proprietors reported a glass surface of 8,811,711 square feet. They had invested in the aggregate \$6,894,985, of which \$3,705,528 represents the value of land, and of improvements other than buildings; \$2,952,280, the value of buildings; \$179,445, that of implements; and \$57,732, that of live stock. Their sales of flowers and plants amounted to \$2,043,124, and of other products, to \$171,319. They expended for labor \$518,677, and for fertilizers, \$41,537. Including the value of products fed to live stock, the average gross income per farm reporting was \$3,036.

In addition to the 734 principal florists' establishments, 2,969 farms and market gardens made use of glass in the propagation of flowers, plants, or vegetables. They had an area under glass of 5,210,827 square feet, making, with the 6,608,783 square feet belonging to the florists' establishments, a total of 11,819,610 square feet of land under glass.

NURSERY PRODUCTS.

The total value of nursery stock sold in 1899 was \$541,032, reported by the operators of 280 farms and nurseries. Of this number, 95 derived their principal income from the nursery business. They had 5,801 acres of land, valued at \$688,035; buildings worth \$256,755; implements and machinery worth \$21,775; and live stock worth \$23,604. Their sales of nursery products amounted to \$457,820, and sales of other products to \$45,765. They expended for labor \$150,365, and for fertilizers, \$9,050. Including value of products fed to live stock, the average gross income per farm reporting was \$5,421.

LABOR AND FERTILIZERS.

The total expenditure for labor on farms in 1899, including the value of board furnished, was \$16,647,730, an average of \$74 per farm. The average was highest on the most intensively cultivated farms, being \$1,583 for nurseries, \$700 for florists' establishments, \$141 for vegetable farms, \$126 for tobacco farms, \$113 for dairy farms, \$89 for hay and grain farms, \$88 for fruit farms, \$70 for sugar farms, and \$50 for live-stock farms. "Managers" expended an average per farm of \$334; "cash tenants," \$90; "share tenants," \$87; and "owners," \$62. White farmers expended \$74 per farm and colored farmers, \$45.

Fertilizers purchased in 1899 cost \$4,685,920, an average of \$21 per farm, and an increase since 1890 of 38.5

per cent. The average was \$95 for nurseries, \$57 for florists' establishments, \$46 for vegetable farms, \$33 for tobacco farms, \$25 for hay and grain farms, \$22 for dairy

farms, \$18 for fruit farms, \$16 for live-stock farms, and \$12 for sugar farms.

IRRIGATION STATISTICS.

Irrigation began more than one hundred years ago in Berks county, where small areas of bottom lands were artificially flooded as early as 1800. Until recent years the practice of irrigation was confined to narrow and comparatively level strips of land edging the streams upon which water could be diverted easily and at slight expense. The hilly nature of the country in which irrigation was first introduced precluded the possibility of any considerable extension of irrigated areas.

The acreage artificially watered in 1899 was devoted principally to hay, more than 93 per cent of the total area irrigated being under this crop. A large part of this acreage was reported from Monroe, Northampton, Lehigh, Bucks, Berks, and Lancaster counties in the southeastern part of the state. In 1899 the acreage of hay irrigated was 758, and the value of the crop was \$17,920, or \$23.64 per acre.

The value of irrigation in truck farming as an assurance against loss by drouth has been demonstrated in several counties of the state, and the reports from irrigated farms show a very large income per acre. The methods of irrigation on these farms vary greatly, and the cost is much higher than on farms where hay is the only crop irrigated.

The water is generally pumped from driven wells by steam power or windmills. In the vicinity of large cities

the farmers occasionally use city water. Notwithstanding the heavy original cost of engines, pumps, pipes, etc., in nearly every instance the value of the irrigated crop reported was equal to or exceeded the first cost. In 1899 the average value per acre of the products derived from irrigated land devoted to truck farming, was \$330.43.

The following table shows the number of irrigators, and acreage irrigated, with cost of construction of irrigation systems, and value of irrigated products in 1899.

TABLE A.—NUMBER OF IRRIGATORS, ACREAGE IRRIGATED, AND COST OF CONSTRUCTION OF IRRIGATION SYSTEMS, WITH ACREAGE AND VALUE OF IRRIGATED CROPS.

COUNTIES.	Number of irrigators.	Acreage irrigated.	Cost of construction of irrigation systems.	IRRIGATED CROPS.		
				Acreage.	Value.	
					Total.	Average per acre.
The State	134	814	\$15,627	804	\$33,220	\$41.32
Berks	37	214	470	204	4,369	21.42
Lancaster	20	189	1,707	189	5,884	31.13
Monroe	8	73	7,020	73	7,600	104.11
Northampton	41	214	2,015	214	7,665	35.82
Other counties	28	124	4,415	124	7,702	62.11